

KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

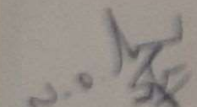
S.P.G. Chidambaram Nader - C. Nagarajapuram Campus

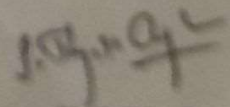
S.P.G.C. Nagar, K. Vellakulam - 625 701 (Near VIRUDHUNAGAR)


DEPARTMENT OF MECHANICAL ENGINEERING

Value Added Course
on
CAD using UG - NX

Academic Year : 2023-2024 (ODD Semester)
Date : 13.02.2024 to 19.02.2024
Duration : 45 Hours
Organized by : CIPET, Madurai


Coordinators


HOD/Mech


Dean (Academic Courses)

KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY



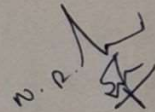
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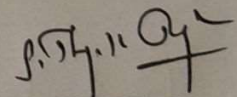
S.P.G.Chidambara Nadar - C.Nagammal Campus

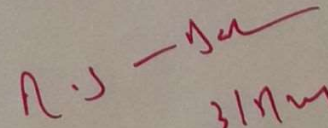
S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

DEPARTMENT OF MECHANICAL ENGINEERING

Content	Details
Academic Year	2023-2024 (EVEN Semester)
Date	13.02.2024 to 19.02.2024
Name of the Value-added course	CAD using UG - NX
Duration	45 Hours
No of Credit	2 Credit
Category	Theory (15 Hours) and Lab (30 hours)
Organized by	CIPET, Madurai
External Coordinator	Mr.E.Sivakumar
Three Member Committee Members	1. Dr. S. Thanga Kasi Rajan, ASP& HoD/Mech 2. Er. R.Sakthivel Murugan, AP/Mech 3. Er. N. R. Madhan, AP/Mech
Internal Coordinators	Er. N. R. Madhan, AP/Mech Dr. S. Muthunatarajan, AP/Mech

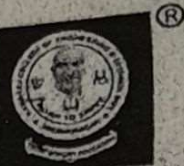

N. R. Madhan
Coordinators


Dr. S. Muthunatarajan
HoD/Mech


3/1/24
Dean (Academic Courses)

KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY



(An Autonomous Institution - Affiliated to Anna University, Chennai)

S.P.G, Chidambara Nadar - C.Nagammal Campus

S.P.G.O. Nagar, K. Vellakulam - 625 701, (Near Virudhunagar), Madurai District

Submitted to the SECRETARY for approval through the PRINCIPAL

Book No.

MECH

Date 29.01.2024

SL.No.

91

VALUE ADDED COURSE | CAD using Unigraphics - Nx | CIPET, MADURAI

Name of the course : CAD using Unigraphics - Nx

Conducted by : CIPET, MADURAI

Duration : 4 days by cipet, madurai } -> 6 Days
2 days interval at parts.

Amount : 5000 INR [18%] / per day per student.

No. of student : 31 nos., II year mechanical Engineering

Payment : Full payment in Advance.

Venue : MECHANICAL CAD LAB.

Approach my please be granted for above mentioned amount.

N.O. Signature of Faculty

J. Thy. 11.01.24
HOD

Total amount = Rs 73,160
also request to provide Machine Requirement for resource persons.

Principal

OFFICE USE

Value Added Course Est

- 1) Account Head
- 2) Budget allotted
- 3) Amount committed / Spent so far
- 4) Balance available

OM

Treasurer

Secretary

Unigraphics-NX | II Year | Mech - I 2023-24 EVEN Sem

Madhan.N.R <madhanmech@kamarajengg.edu.in>

Mon 2/12/2024 12:37 PM

To: 22UME <22ume@kamarajengg.edu.in>

Cc: MUTHU NATARAJAN.S <muthunatarajanmech@kamarajengg.edu.in>; HODMECH <hodmech@kamarajengg.edu.in>

Dear students,

As per guidelines from **R2021**, a value-added course is mandatory for your curriculum. As discussed in the three-member committee conducted on 18.01.2024, our department is planning to organize the Value-added course on **"CAD using Unigraphics-NX"** from **13.02.2024 to 19.02.2024**.

Experts from CIPET, Madurai, are going to handle this programme. At the end of this programme, evaluation has been done by the experts. You are instructed to attend this programme without fail.

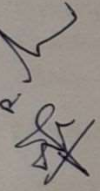
Venue: KCER-MECH-CAD Lab

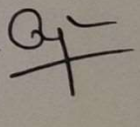
Timing: 09.10 am to 07.00 pm

With Regards,
Madhan N R,
Assistant Professor,
Mechanical Department,

KAMARAJ

College of Engg and Tech,
Virudhunagar.

N.P.


S. Thy. 12


Department of Mechanical Engineering

Title of the Program : Value Added Course on "CAD using UG - NX"

Date: 13.02.2024 to 19.02.2024

Participants : II year (2022 – 2026 Batch)

Academic Year: 2023 – 2024 EVEN

Conducted by : CIPET, Madurai

Venue : KCER-MECH-CAD Lab

Syllabus

INTRODUCTION

Introduction to NX - System Requirements - Getting Started with NX - Important Terms and Definitions - Understanding the Functions of the Mouse Buttons – Toolbars - Hot Keys - Color Scheme - Dialog Boxes in NX - Selecting Objects - Deselecting Objects - Selecting Objects Using the Quick Pick Dialog Box - Self-Evaluation Test

DRAWING SKETCHES FOR SOLID MODELS

The Sketcher Environment - Starting NX - Starting a New Document in NX - Invoking Different NX Environments - Creating Three Fixed Datum Planes (XC-YC, YC-ZC, XC-ZC) - Displaying the WCS - Invoking the Sketcher Environment - Sketching Tools - Drawing Sketches Using the Profile Tool - Using Help Lines to Locate Points - Drawing Individual Lines - Drawing Arcs - Drawing Circles - Drawing Rectangles - Placing Points - Drawing Ellipses or Elliptical Arcs - Drawing Conics

EDITING, EXTRUDING, AND REVOLVING SKETCHES

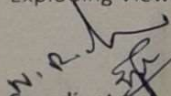
Editing Sketches - Trimming Sketched Entities - Extending Sketched Entities - Creating a Corner between Sketched Entities - Mirroring Sketched Entities - Copying, Moving, and Rotating Sketched Entities - Transforming Sketched Entities - Editing Sketched Entities by Dragging - Exiting the Sketcher Environment - Changing the View of the Sketch - Creating Base Features by Extruding - Extrude Dialog Box Options - Creating Solid Revolved Bodies - Hiding Entities - Showing Hidden Entities - Hiding All Entities Using a Single Tool - Rotating the View of a Model in 3D Space - Setting Display Modes

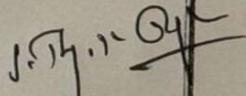
MODELING TOOLS

Advanced Modeling Tools - Creating Simple Holes - Creating Counter bore Holes - Creating Countersink Holes - Creating Holes by using the Hole Tool - Creating General Holes - Creating Drill Size Hole - Creating Screw Clearance Hole - Creating Threaded Hole - Creating Hole Series - Creating Grooves - Creating Rectangular Grooves - Creating Slots - Creating Dove-Tail Slots - Creating an Edge Blend - Advanced Modeling Tools - Instance Feature Tool - Creating Rectangular Arrays Using the Instance Feature Tool - Creating Circular Arrays Using the Instance Feature Tool - Using the Pattern Face Option of the Instance Feature Tool - Mirror Feature Tool - Mirror Body Tool - Sweeping Sketches along the Guide Curves - Creating Swept Features - Creating Tubes or Cables - Creating Threads - Creating Symbolic Threads - Creating Detailed Threads - Creating Shell Features - Shelling the Entire Solid Body

ASSEMBLY MODELING

The Assembly Environment - Creating Subassemblies - Editing Assembly Constraints - Modifying the Assembly Constraints - Checking the Interference between the Components of an Assembly - Checking Interference and Clearance - Using the Check Clearance Analysis - Checking Interference Using the Assembly Clearance Method - Exploding Views Automatically & Manually


Coordinators


HoD/Mech



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S.P.O. C. Nagar, K. Veludurai - 625 701 (Near VIRUDHUNAGAR).

Department of Mechanical Engineering

Title of the Program : Value Added Course on "CAD using UG - NX"

Date: 13.02.2024 to 19.02.2024

Participants : II year (2022 – 2026 Batch)

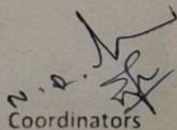
Academic Year: 2023 – 2024 EVEN

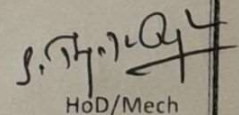
Conducted by : CIPET, Madurai

Venue : KCER-MECH-CAD Lab

Value Added Course Outcome

Course Outcome	Details
1	Understand industry standards and best practices for creating manufacturing-ready drawings.
2	Create 3D models of mechanical parts and assemblies using NX CAD's robust modeling tools.
3	Utilize simulation and analysis tools within NX CAD to evaluate the performance of designs.
4	Learn to manipulate surfaces, curves, and splines to achieve desired aesthetics and functionality.
5	Understand the importance of data integrity, security, and revision control in collaborative design projects.


Coordinators


HoD/Mech

Department of Mechanical Engineering

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Academic Year: 2023 – 2024 EVEN

Conducted by : CIPET, Madurai

Venue : KCER-MECH-CAD Lab

Approval of Board of Study Meeting

Board of Study Meeting: VI

Mode: hybrid mode

Date & Timing: 11.03.2023 & 10.00 AM

Page No: 15 of 16

006.06.00: Information about the (Points Discussed in the following)

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	Dr.S. Thangakasirajan, AP/Mech Presented the new amendment given by Anna University. Bos members accepted the amendments.
006.06.02	Pass Percentage of students	Dr.B. Balavairavan, AP/Mech Presented the Pass percentage year wise and course wise. Bos members accepted the results.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	Mr. N.R. Madhan, AP/Mech Presented the Value-added course planned for the academic year 2022 - 2023. BoS members suggested some value-added courses for next academic year: LabVIEW, Computational fluid dynamics, Image processing and coding, Deep learning in Metallurgy, <u>NX CAD, CATIA and SolidWorks.</u>

N.R. Madhan
 Coordinators

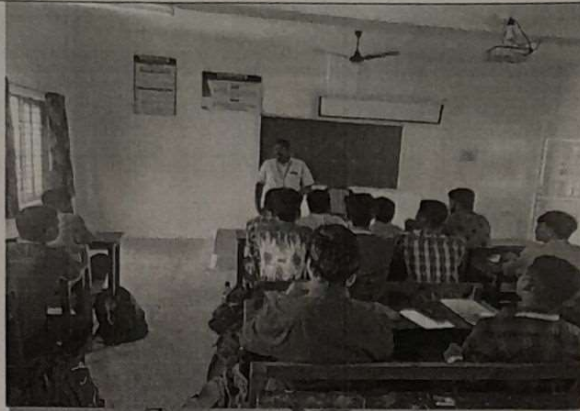
S. Thangakasirajan
 HoD/Mech

DEPARTMENT OF MECHANICAL ENGINEERING

Three-member committee meeting for value added course selection

Agenda	Value Added Course Selection Meeting
Date	: 18.01.2024
Time	: 09.10 AM
Venue	: E14 Hall, Academic Block Four, Third Floor
Members Present	<p>Three Member Committee Members</p> <ol style="list-style-type: none"> 1. Dr. S. Thanga Kasi Rajan, ASP& HoD/Mech 2. Er.R.Sakthivel Murugan, AP/Mech 3. Er. N.R. Madhan, AP/Mech <p>Chairperson</p> <ol style="list-style-type: none"> 1. Dr.S.Muthu Natarajan, AP/Mech <p>Co-ordinators</p> <ol style="list-style-type: none"> 1. Er. N.R. Madhan, AP/Mech 2. Dr.S.Muthu Natarajan, AP/Mech <p>Class representative (2021 – 2025 Batch)</p> <ol style="list-style-type: none"> 1. Mr. Naveen N.M. (22UME012), II Year/ Student 2. Mr. Dhanush R.K. (22UME013), II Year/ Student 3. Mr. Naveen Sarathi.V (22UME022), II Year/ Student 4. Mr. Kishore Vikram.N (22UME029), II Year/ Student
Minutes of the Meeting	<p>It is optional to complete a Value-Added Course for Regulation 2021. In this regard a three-member committee has been formed and a meeting is organized to select the course for registration.</p> <ul style="list-style-type: none"> • Meeting started by 09.10 AM. Dr. S. Thanga Kasi Rajan, Associate Professor & Head of the Department, welcome the gathering. He has advised to maintain SOP for value added course. • Er. N. R. Madhan, Assistant Professor & Value added course incharge has proposed course offered by <ul style="list-style-type: none"> o CIPET, Madurai, offering CAD Using Unigraphics - NX. • Based on the suggestion given by the 2022-2026 Batch Chairperson, 3 committee members for Value added course and student representative, “CAD Using Unigraphics - NX” course is agreed to take in this IV semester for 2022-2026 Batch students. Courses were selected by the students based on their interested. <p>Justification for the Courses selection:</p> <p>The justification for the course selection were as follows</p> <ol style="list-style-type: none"> i. These courses will be useful for their project work ii. It is a 45-hour courses (2 Credits) iii. These courses are useful to meet the Industrial Needs iv. These courses are in emerging areas.

Proof



S. Thangaraj

N.R. Madhan

Three Member Committee Members
Dr. S. Thanga Kasi Rajan, ASP & HoD/Mech
Er. R. Sakthivel Murugan, AP/Mech
Er. N.R. Madhan, AP/Mech

N.R. Madhan

Domain Experts
Er. N.R. Madhan, AP/Mech
Dr. S. Muthu Natarajan AP/Mech

S. Muthu Natarajan

Chairperson
Dr. S. Muthu Natarajan AP/Mech

S. Thangaraj

HoD/Mech

R.V. - San
31574

Dean Academics

Department of Mechanical Engineering

Title of the Program : Value Added Course on "CAD using UG - NX"

Date: 13.02.2024 to 19.02.2024

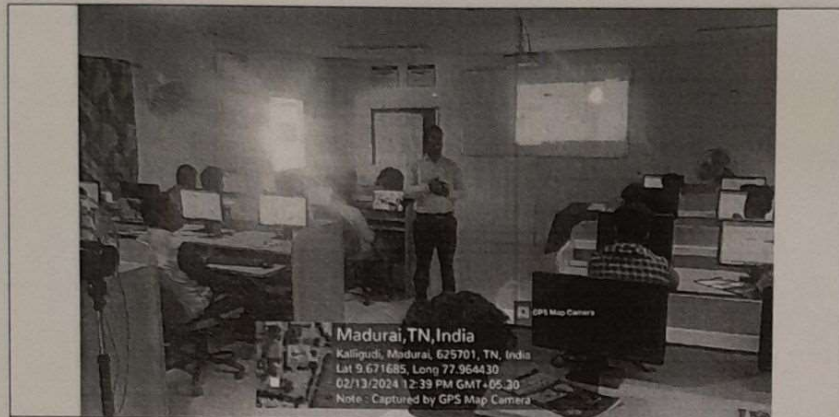
Participants : II year (2022 – 2026 Batch)

Academic Year: 2023 – 2024 EVEN

Conducted by : CIPET, Madurai

Venue : KCER-MECH-CAD Lab

Photo Proof



During Inaugural Session on 13.02.2024



During Theory Session on 14.02.2024



During the examination on 19.02.2024

N. A. M. S.
Coordinators

S. J. S. S.
HOD/Mech

Department of Mechanical Engineering

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Academic Year: 2023 – 2024 EVEN

Conducted by : CIPET, Madurai

Venue : KCER-MECH-CAD Lab

Attendance Report

S No	Roll Number	Register Number	Student Name	13/02	14/02	15/02	16/02	17/02	19/02
1	22UME001	920422114014	MURUGAN.J	Sign	Sign	Sign	Sign	Sign	Sign
2	22UME002	920422114013	MARIA REENALDIN.G	Sign	Sign	Sign	Sign	Sign	Sign
3	22UME003	920422114020	SUBAN KUMAR.P	P. Suban	P. Suban	P. Suban	P. Suban	P. Suban	P. Suban
4	22UME004	920422114022	SURENDAR KUMAR.M	Sign	Sign	Sign	Sign	Sign	Sign
5	22UME005	920422114025	VIGNESHWAR.S	Sign	Sign	Sign	Sign	Sign	Sign
6	22UME006	920422114002	ABINASH.T	Sign	Sign	Sign	Sign	Sign	Sign
7	22UME007	920422114007	GOWTHAM.A	Sign	Sign	Sign	Sign	Sign	Sign
8	22UME008	920422114021	SUDHARSHAN.V.G	Sign	Sign	Sign	Sign	Sign	Sign
9	22UME009	920422114010	KARUPPASAMY.S	Sign	Sign	Sign	Sign	Sign	Sign
10	22UME010	920422114023	VELMURUGAN.M	M. Velmurugan	M. Velmurugan	M. Velmurugan	M. Velmurugan	M. Velmurugan	M. Velmurugan
11	22UME011	920422114004	AVINESH.T	T. Avin	T. Avin	T. Avin	T. Avin	T. Avin	T. Avin
12	22UME012	920422114015	NAVEEN.N.M	N.M.D	N.M.D	N.M.D	N.M.D	N.M.D	N.M.D
13	22UME013	920422114006	DHANUSH.R.K	Sign	Sign	Sign	Sign	Sign	Sign
14	22UME014	920422114001	AATHI.V	V. Athi	V. Athi	V. Athi	V. Athi	V. Athi	V. Athi
15	22UME016	920422114026	VIJAYAN.S.P	S.P.D	S.P.D	S.P.D	S.P.D	S.P.D	S.P.D
16	22UME017	920422114008	GURU PRAVEEN.D	Sign	Sign	Sign	Sign	Sign	Sign
17	22UME018	920422114017	PARAMASIVAN.B	B. Param	B. Param	B. Param	B. Param	B. Param	B. Param
18	22UME019	920422114024	VIGNESH.B	Vignesh	Vignesh	Vignesh	Vignesh	Vignesh	Vignesh
19	22UME020	920422114003	ANIKET LAKRA	Aniket	Aniket	Aniket	Aniket	Aniket	Aniket
20	22UME021	920422114009	KARTHIK.M	M. Karthi	M. Karthi	M. Karthi	M. Karthi	M. Karthi	M. Karthi
21	22UME022	920422114016	NAVEEN SARATHI.V	N. Sarathi	N. Sarathi	N. Sarathi	N. Sarathi	N. Sarathi	N. Sarathi
22	22UME023	920422114011	KIRUBAJI.T.S	T.S. Kirubaji	T.S. Kirubaji	T.S. Kirubaji	T.S. Kirubaji	T.S. Kirubaji	T.S. Kirubaji
23	22UME024	920422114019	SOLEESWARAN.R	R. Soleeswaran	R. Soleeswaran	R. Soleeswaran	R. Soleeswaran	R. Soleeswaran	R. Soleeswaran
24	22UME025	920422114005	BALAJI.S	Sign	Sign	Sign	Sign	Sign	Sign
25	22UME026	920422114018	SIVAKANNAN.S	Sign	Sign	Sign	Sign	Sign	Sign
26	22UME027	920422114012	MANIKANDAN.G	Sign	Sign	Sign	Sign	Sign	Sign
27	22UME028	920422114305	VISHWAMARUDHU.K	K. Vishwamarudhu	K. Vishwamarudhu	K. Vishwamarudhu	K. Vishwamarudhu	K. Vishwamarudhu	K. Vishwamarudhu
28	22UME029	920422114303	KISHORE VIKRAM.N	N. Kishore	N. Kishore	N. Kishore	N. Kishore	N. Kishore	N. Kishore
29	22UME030	920422114304	THANGAVELPANDIAN.P	P. Thangavelpandian	P. Thangavelpandian	P. Thangavelpandian	P. Thangavelpandian	P. Thangavelpandian	P. Thangavelpandian
30	22UME031	920422114301	ARAVIND KUMAR.S	S. Aravind	S. Aravind	S. Aravind	S. Aravind	S. Aravind	S. Aravind
31	22UME032	920422114302	HARI BALAJI.L	L. Hari	L. Hari	L. Hari	L. Hari	L. Hari	L. Hari

(Signature)
Coordinator

(Signature)
HoD/Mech

Department of Mechanical Engineering

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Date: 13.02.2024 to 19.02.2024

Participants : II year (2022 – 2026 Batch)

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Conducted by : CIPET, Madurai

Venue : KCER-MECH-CAD Lab

Attendance Statement

S. No.	Roll Number	Register Number	Student Name	Attendance Percentage
1	22UME001	920422114014	MURUGAN.J	100
2	22UME002	920422114013	MARIA REENALDIN.G	75
3	22UME003	920422114020	SUBAN KUMAR.P	100
4	22UME004	920422114022	SURENDAR KUMAR.M	100
5	22UME005	920422114025	VIGNESHWAR.S	100
6	22UME006	920422114002	ABINASH.T	100
7	22UME007	920422114007	GOWTHAM.A	100
8	22UME008	920422114021	SUDHARSHAN.V.G	100
9	22UME009	920422114010	KARUPPASAMY.S	100
10	22UME010	920422114023	VELMURUGAN.M	100
11	22UME011	920422114004	AVINESH.T	100
12	22UME012	920422114015	NAVEEN.N.M	75
13	22UME013	920422114006	DHANUSH.R.K	75
14	22UME014	920422114001	AATHI.V	100
15	22UME016	920422114026	VIJAYAN.S.P	100
16	22UME017	920422114008	GURU PRAVEEN.D	75
17	22UME018	920422114017	PARAMASIVAN.B	100
18	22UME019	920422114024	VIGNESH.B	75
19	22UME020	920422114003	ANIKET LAKRA	100
20	22UME021	920422114009	KARTHIK.M	100
21	22UME022	920422114016	NAVEEN SARATHI.V	75
22	22UME023	920422114011	KIRUBAJI.T.S	100
23	22UME024	920422114019	SOLEESWARAN.R	100
24	22UME025	920422114005	BALAJI.S	100
25	22UME026	920422114018	SIVAKANNAN.S	100
26	22UME027	920422114012	MANIKANDAN.G	100
27	22UME028	920422114305	VISHWAMARUDHU.K	100
28	22UME029	920422114303	KISHORE VIKRAM.N	100
29	22UME030	920422114304	THANGAVELPANDIAN.P	100
30	22UME031	920422114301	ARAVIND KUMAR.S	100
31	22UME032	920422114302	HARI BALAJI.L	100

[Signature]
 Coordinators

[Signature]
 HoD/Mech